

Y1878 Fiberoptic Illuminator

1 GENERAL SYSTEM DESCRIPTION

1.1 System Features

The **Y1878** 300-Watt Xenon light source described herein is specifically designed for use as an illumination source for fiber optic illumination applications. As a result, the system shall have the following general features:

1.1.1 4 port flush mount design turret for fiber optic light cable connection to fit ACMI, Storz, Wolf, Olympus industry standard fibers

1.1.2 Simple lamp module replacement with no tools required

1.1.3 Simple power "ON" switch separate from the lamp ignition switch

1.1.4 Standard lamp safety features

1.1.5 Low noise generation

1.1.6 Very high brightness light output.

1.1.7 Even output beam profile

1.1.8 Compact footprint

1.1.9 Quick re-strike in the event that the device shuts down from overheating

1.1.10 Single world-wide universal power supply

2 INTENDED USAGE

2.1 General

This 300 W Xenon light source shall be used as an illumination source to provide light to fiber optic cables or light guides. **Atlas Specialty Lighting assumes no responsibility for suitability for any particular application of the lightsource or any consequential damages associated with the use of the lightsource.**

2.2 Personnel

2.2.1 Any trained personnel that has familiarized themselves with the product by reading the operation manual provided

2.3 Sterilization/Disinfection

2.3.1 The light source may be wiped-down with hospital approved disinfectants (e.g. 10% clorox/90% water solution) applied with a damp cloth.

3 ASSOCIATED EQUIPMENT

3.1 Fiber optic light guides (cables) not provided by Atlas Specialty Lighting

1.1	Input Voltage	100 - 240 VAC, 50/60Hz universal, 6.0A input	
1.2	AC Power Connector	Located on rear panel, dual fuses	
1.3	Line cord	IEC320, 6', US and Europe options	
2 Performance, Features & Warranty			
2.1	Light Output	- 2000 Lumens nominal initial output through 6mm glass rod at full rated power	All light output specifications refer to "system only" performance. Light output via optical fibers or other optical components may vary.
		- Spectral output 380 - 750nm nominal	
		- ≤ 8% instability p-p through 6mm glass rod @ 0-100Hz	
		- Beam profile to have "smooth" distribution with no shadows or sharp peaks	
2.2	Overtemperature Protection	Automatic shut down in the event of overheating	Fans operate when AC power is on and are independent of lamp status.
2.3	Over Heat Recovery / Auto Cool	Unit to become fully operational within approximately 3 minutes after thermal shut down & all obstructions to air flow removed at environmental temperature of ≤ 22C (72F)	Fans will remain on in the event of thermal shut down when power is ON. Lamp must be switched on by using lamp ON / OFF switch located on front panel
2.4	Fiber Optic Connection Safety Feature	- Lamp will not ignite unless a fiber optic cable is fully inserted into the active port on the turret	Fans will remain on in the absence of a fiber optic cable inserted into active port when power is ON
		- Lamp power is cut or blocked if fiber optic cable is removed from active port to prevent accidental light leakage	
	Lamp Power Supply	PS300 type	
2.5	Lamp Module	Y1879 "low profile" CERMAX 300 Watt lamp module, incorporating proprietary type lamp	Lamp specifications may vary slightly from standard PE300C-10F
2.6	Lamp Module Replacement	By easy access to lamp module via latched hinged door. No tools required.	Lamp replacement door "interlocked" for safety. Lamp power will be cut when door is open
2.7	Lamp Life	- 500 hours to 50% of initial output specification measured through 6mm glass rod	
		- ≥ 1000 hours typical measured through 6mm glass rod	
2.8	System Warranty	12 months excluding lamp	
3 User Interface / Control			
3.1	User Instructions	Operation manual to be included with every lightsource	
3.2	Standby Switch	Located on front panel, illuminated when ON	Lamp ignition not automatic with standby switch ON
3.3	Lamp ON / OFF Switch	Located on front panel. Lamp ON status indicated by LED on front panel. Illuminated when lamp is ON.	When lamp ON button is depressed to turn lamp on, the "lamp on LED" flashes until such time as the lamp ignites. If the lamp fails to ignite in approximately 4 seconds (possible fault condition) the system will time out and the lamp ON button will need to be depressed again to initiate lamp ignition.
3.4	Fiber Optic Adapter	- 4 port turret with WOLF, STORZ, ACMI, OLYMPUS ports	Turret rotated to select one fiber port for illumination at a time. Turret rotation will be resistant enough to prevent non-deliberate rotation by pulling fiber cables
3.5	Light Attenuation Shutter	- Controlled by membrane buttons on front panel.	
		- 2 Buttons for relative intensity increments (up and down)	
		- 1 button for shutter fully closed	
		- 1 button for shutter fully open	
		- Relative level of illumination indicated by a digital numeric display (blue numerals)	
3.6	Lamp Hour Counter	- Lamp hour mode is selected while "Lamp Hours" button located on front panel is depressed.	Lamp hour counter also records number of time the lamp hours have been reset. This number is displayed when lamp hours are re-set.
		- While lamp hour mode is selected the number of elapsed lamp hours will be displayed on the relative brightness display.	
		- Elapsed lamp hours will be displayed up to 999 hours.	
		- Elapsed lamp hours displayed can be reset by end user	
4 Mechanical & Environmental			
4.1	Dimensions	Height 5.0" x Width 16.9" x Depth 13.8" (nominal)	Designed for modular expansion
4.2	Weight	20lbs (9kg) nominal	
4.3	Exterior finish	Atlas Specialty Lighting art work and colors	
4.4	Touch Temperature	Per UL2601-1	
4.5	Sterilization	The light source may be wiped-down with hospital approved disinfectants (e.g. 10% clorox/90% water solution) applied with a damp cloth (must not be wet)	
4.6	Operating Temperature	6C to 40C	
4.7	Storage Temperature	-20C to + 85C	
4.8	Operating & Storage Humidity	10 - 85% relative humidity, non-condensing	
4.9	Operating Pressure	1 Atmosphere nominal	
4.11	Audible Noise	< 45dB	
4.12	Shipping, Shock & Vibration	per ISTA 1A	
4.13	Cooling	Vents to direct airflow toward the back of the unit	
5 Regulatory Approvals			
5.1	Compliance to standards	-IEC 60601-1:1998+A1:1991+A2:1995+A1.3:1997	
		-UL 60601-1:2003	
		-EN 60601-1:1990+A1:1993+A2:1995+A13:1997	
		-EN 60601-1-2:2001	
		-CAN / CSA C22.2 No. 601.1/M90(R1997),B/98,S1-94	
5.2	Regulatory Markings	- UL mark	
		- CUL mark	
		- CE mark	

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